

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the reasons that follow. At the time of the outstanding Office Action, claims 1-16 were pending. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Prior Art Rejections:

Claims 1-16 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 7,181,503 to Choi et al. (hereinafter “Choi”). This rejection is respectfully traversed for at least the following reasons.

Independent claim 1 recites an “apparatus for detecting an IP (Internet Protocol) address of a device connected to a subnet network” that includes: “a search IP address detector for detecting at least one search IP address from IP addresses which are selected from a predetermined number of IP addresses as a unit from possible IP addresses on the subnet network,” “an IP address detector for detecting an IP address of a target device on the subnet network from the at least one search IP address detected” and “a controller for terminating a subnet network information detection operation either when all possible IP addresses on the subnet network have been selected or when the IP address of the target device has been detected.” Independent claims 4, 11, 12, 14 and 15 recite analogous features.

Choi fails to teach or disclose all of the features of independent claim 1. Choi is directed towards searching for a DNS server in an outernet. (Title, Abstract). The Examiner points to the Description of the Related Art in Choi to teach “detecting an IP (Internet Protocol) address of a device connected to a subnet network.” This passages details issues with finding the IP address of a DNS server that is not in a subnet. Applicants respectfully assert that an outernet is not equivalent to a subnet, as also evidenced by the delineation drawn between the two in Choi. Further, finding the address of a DNS server in an outernet is in no way equivalent to detecting an IP address of a device connected to a subnet network.

Choi also fails to teach or disclose “a search IP address detector for detecting at least one search IP address from IP addresses which are selected from a predetermined number of

IP addresses as a unit from possible IP addresses on the subnet network.” The Examiner points to the following passage of Choi to teach this feature:

“According to another aspect of the present invention, there is provided a method of searching for a DNS server on an outernet, the method including creating a DNS search message and transmitting it to a first subnet to which a host belongs so as to receive a response message to the DNS search message, and transmitting the DNS search message to an outernet to which the host does not belong so as to receive the response message; creating a DNS register message, transmitting it to a second subnet to which a DNS server belongs, receiving a response message to the DNS register message from a first router belonging to the second subnet, receiving a DNS search message related to the DNS server from the first router, and transmitting a response message to the DNS search message to the first router; receiving the DNS register message from the DNS server to register the DNS server to the first router, receiving a DNS search message from the second subnet, and transmitting the DNS search message to the registered DNS server; and receiving a DNS search message from a third subnet to which a second router belongs, transmitting the DNS search message with a hop limit to a third router, and decreasing the hop limit by a predetermined value.” (column 2, lines 38-60)

However, this passage of Choi teaches searching for a DNS server in an outernet. Choi teaches creating a DNS search message and sending it to both a subnet to which a host belongs, and an outernet to which the host does not belong. Choi also teaches sending a DNS register message to a subnet to which a DNS server belongs and sending response messages to various routers. However, there is no teaching or suggestion in this passage, or anywhere in the disclosure of Choi, of detecting at least one search IP address from IP addresses which are selected from a predetermined number of IP addresses as a unit from possible IP addresses on the subnet network. Choi fails to teach or disclose a predetermined number of IP addresses as a unit from possible IP addresses on a subnet network. Choi also fails to teach or disclose detecting at least one search IP address from IP addresses selected from that unit.

Choi also fails to teach or disclose “an IP address detector for detecting an IP address of a target device on the subnet network from the at least one search IP address detected.” The Examiner points to a paragraph from the Description of Related Art of Choi to teach this feature, which states that an IP address of “a DNS server can be easily detected using the conventional method only when the DNS server is present within a subnet.” (column 1, lines 59-62). However, the invention as claimed requires more than detecting the address of a DNS server in a subnet. Rather, the invention as claimed requires “detecting an IP address of a target device on the subnet network **from the at least one search IP address detected.**” As mentioned above, Choi fails to disclose detecting the at least one search IP address. Further, there is no teaching or suggestion in Choi, that even if a search IP address were detected, that the IP address of a target device could be detected from this search IP address.

Choi also fails to teach or disclose “a controller for terminating a subnet network information detection operation either when all possible IP addresses on the subnet network have been selected or when the IP address of the target device has been detected.” The Examiner points to the following passage of Choi to teach this feature:

“According to one aspect of the present invention, there is provided an apparatus for searching for a DNS server in an outernet, the apparatus including a first outernet DNS searching unit included in a host. The first searching unit creating a DNS search message and transmitting it to a first subnet so as to receive a response message to the DNS search message, and the first searching unit transmitting the DNS search message to an outernet when the response message is not transmitted. The host belongs to the first subnet and does not belong to the outernet. The apparatus further includes a second outernet DNS searching unit included in a DNS server. The second searching unit creating a DNS register message, transmitting it to a second subnet to receive a response message to the DNS register message from a first router belonging to the second subnet, receiving a DNS search message related to the DNS server from the first router, and sending a response message to the DNS search message to the first router. The apparatus further includes a third outernet DNS searching

unit included in a router where a DNS server is registered. The third searching unit receiving a DNS register message from the DNS server and registering the DNS server with the router, receiving a DNS search message from the second subnet, and transmitting the DNS search message to the registered DNS server. The apparatus further includes a fourth outernet DNS searching unit included in a router where a DNS server is not registered. The fourth searching unit receiving a DNS search message from a third subnet, transmitting the DNS search message with a hop limit to a third router belonging to the third subnet, and decreasing the hop limit by a predetermined value. A second router also belongs to the third subnet.” (column 2, lines 5-60)

There is no teaching or suggestion, in this passage or anywhere else in the disclosure of Choi, of “a controller for terminating a subnet network information detection operation either when all possible IP addresses on the subnet network have been selected or when the IP address of the target device has been detected.” Choi fails to detail under what conditions the search operation ends. There is no teaching or suggestion in Choi that the detection operation is terminated when either all the possible IP address in the subnet have been selected or the IP address of the target device has been detected. Rather, Choi teaches searching the subnet and the outernets for a DNS server. There is no suggestion in Choi that the search for the DNS server would end if all of the IP addresses in the subnet were searched. Rather, Choi explicitly teaches searching outernets as well. Thus, Choi also fails to teach this feature of the invention as claimed.

The dependent claims are also patentable for at least the same reasons as the independent claim on which they ultimately depend. In addition, they recite additional patentable features when considered as a whole.

Conclusion:

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 7/16/08

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